Karl Hübner (left) talks construction with Sean Dolan at Baumholder's vehicle maintenance facility site.

Horses to HUMVEES

Story and photos by Grant Sattler

The horse is out of the barn - vehicle maintainers in Baumholder will not be working in derelict stables any longer. The Baumholder Resident Office is progressing on the first of three major maintenance facility construction projects on Smith Barracks in Baumholder, Germany.

Project No. 1, programmed at $9 million, is the design and construction of a direct support vehicle maintenance facility to the U.S. Army Europe standard. The facility will include a heavy maintenance shop, two light maintenance sheds, a storage facility for deployment-related equipment, hard stand, oil/water separation, adjacent roadways and parking lots for soldiers' privately owned vehicles, said Project Engineer Martin Rothhaar.

Construction began September 2002 on the indirect project managed through the *Staatsbauamt Idar-Oberstein* under the international agreement known as ABG75. Site preparation work began with the demolition of existing maintenance buildings and leveling of the tiered hillside site to a single level about the

equivalent area of five football fields.

Completion of Project No. 1 is anticipated by March 2004, Rothhaar said.

In total, there are three vehicle maintenance shop projects currently planned for Baumholder, Resident Engineer Sean Dolan explained. Project No. 1 is under way and construction contracts are set to award for the other two, he said.

Site preparation and remediation of soils from decades of spilled petroleum products have been completed in the first phase for Project No. 2, located just down the road. Structures demolished there were originally horse stables dating from early in the 20th Century. Construction in the second phase for this motor pool facility project will also have two sheds, a maintenance shop, and deployment building, which is adapted to a two-tiered site.

In the third project, existing maintenance Buildings 8328 and 8330 will be extended on both ends, more than doubling their capacity. The project also includes five storage sheds without maintenance bays and two grease racks as well as a deployment storage building and the hardstands which will be replaced, Dolan said.

A primary consideration for all three projects has been to ensure the design will accommodate any future vehicles. "We've planned ahead ... we should be able to accommodate any type of new equipment that the Army may employ in their future force structure," Dolan said. "Today we're looking down the road as we're designing and building facilities."

Rothhaar said the maintenance building where heavy maintenance will be performed on a variety of vehicles is 103 meters long and 20 meters wide with a total of 20 bays. The two-story center of the facility will house administrative space, tool rooms, and break areas for soldiers. Other features of the enclosed facility are inspection pits, compressed air systems, and four overhead cranes. Each end of the shop will have two overhead 10-ton capacity cranes that can be moved laterally and horizontally to cover the entire work area. Rothhaar said the cranes can be used in tandem to increase the capacity to 20 tons.

While heavy maintenance will be done in the maintenance shop, light maintenance will be performed in two covered sheds with 16 bays to a side, for a total of 64 work spaces. Each shed has a maintenance bay with two working pits for changing fluids and performing low echelon maintenance at one end, Rothhaar said.

The pits, like other major components of the buildings, will be precast and brought on site for installation. The contractor, a joint venture of firm Walter Bau and firm Bilfinger and Berger, began construction first with the shed farthest back on the site.

Dolan said the construction was somewhat unique as concrete foundation blocks were cast in place on site along a row in the center where the shed would stand. Then prefabricated pillars were trucked to the site and set into the blocks. "Once it is down in there, they grout it in place," Dolan said. "[using] high strength, non-shrink grout."

Steel rafters with an inverted pitch are placed atop each pillar, making a "Y" shaped roof structure. The sheds are then given a metal roof skin and the sides are enclosed. Finally, the concrete floors and work pits are completed.

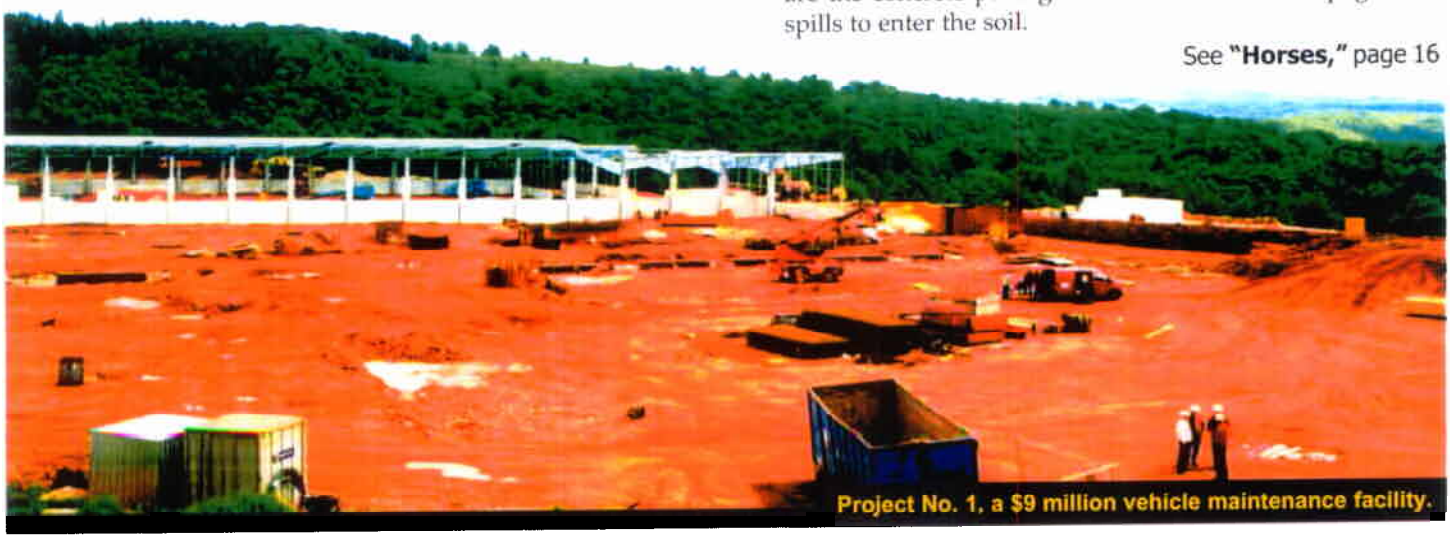
The maintenance shop uses similar blocks and pillars, but rather than being aligned along a central spine, the pillars are around the outside walls in a more conventional design necessary to support the cranes, Dolan said. The maintenance shop, like the deployment storage building built using normal masonry block construction, will be fully enclosed and have a normally pitched roof. The deployment storage building is designed to contain deployment maintenance kits and equipment used to transport vehicles.

The entire vehicle storage hardstand area surrounding the facility is curbed to control rain runoff which will flow into an oil/water separator to mitigate potential contamination of soil and ground water.

"The type of contamination we've had in the past should not happen at the new facility," Rothhaar said. "All the runoff will be collected and run through the separator."

Additionally, all of the hardstand will be concrete. Gone are the concrete paving blocks that allowed seepage from spills to enter the soil.

See **"Horses,"** page 16



Project No. 1, a $9 million vehicle maintenance facility.

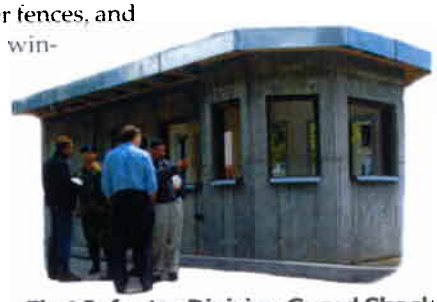
Protecting the Force

Story and photos by Brian H. Temple

U.S. Army Corps of Engineers employees are working hard to keep terrorists at bay. Europe District teams and contractors are rebuilding and fortifying gates, installing retractable bollards, reinforcing perimeter fences, and equipping buildings with blast resistant windows and doors.

One such project, a $1.9 million force protection effort at Leighton Barracks in Würzburg, Germany, will be completed in July, increasing protection for U.S. Army Europe troops there.

Frank Gonzales Jr., project engineer with Europe District's Ansbach Area Office, said the Corps is using contractor Mickan General-Bau-Gesellschaft Amberg mbH & Co. for several jobs. Mickan will build a new guard shack at the First Infantry Division (1ID) gate, and equip the 1ID headquarters with blast resistant windows, doors, reinforced suspended ceilings, and air ventilation systems.



First Infantry Division Guard Shack

The windows, some of which are more than eight inches thick and cost around $8,000 apiece, have to be installed by crane, Gonzales said. "Looking at a drawing you try to visualize the frame, the window, the glazing in your mind, but once you actually see it, it's astonishing."

Gonzales said they had just four days - one training holiday, a weekend, and a federal holiday - to complete the job. "The plan was to install a protective covering [over furniture], demolish the ceilings, install the ducts and the AC systems ... and send in a cleaning crew to clean up the dust and shampoo the carpet," Gonzales said. During that four-day

These pipes will be connected to form an oil/water separator preventing water and soil contamination.

"Horses" continued from page 15

The separator will be alarmed, notifying the Directorate of Public Works when it needs to be emptied of oil, Dolan said.

Environmental considerations also played into preparation of the site. Concrete from the demolished buildings was crushed to reuse as fill material. "It makes a nice, well-graded product," Dolan said. "They'll use that various places on site rather than haul it off to a land fill."

Some of the extra fill has been used to reduce the grade of a side road accessing a rifle range and military operations in urban terrain training area.

"We had lots of excess material so it made sense to try to utilize it and mitigate the effects of a steep road grade during winter weather conditions," Dolan said.

Karl Hübner, Chief Engineering, Planning and Services, from the 222d Base Support Battalion's Directorate of Public Works, said the project is going well and that integration into the existing base infrastructure has been no problem.

"We've had enough time to plan for it," Hübner said. "I remember maybe 12 or 13 years ago the first attempt was made for this project, ... but it's been slipping in the MCA and so on. So we had plenty of time, [along with] the Bauamt to do good design."

Hübner said USAREUR - Installation Management Activity has been involved in the design process all along, ensuring the facility meets the current standards.

Dolan said the Corps has an excellent working relationship with the Baumholder DPW. "[W]e work closely together to try to make sure the customer gets what they really need."

Dolan said that Rothhaar, as the project engineer for Project No. 1, is performing design review for maintenance facility Projects No. 2 and 3. "The lessons that he's learned on this one [can be applied] when he's reviewing plans and specs on the other ones ..." he said.